

## REMARKS

The present amendment is in response to the Official Action mailed on December 18, 2002, in which Claims 1 through 25 are rejected under 35 U.S.C. Section 103(a). Applicant has thoroughly reviewed the outstanding Office Action including the Examiner's Actions and the reference cited therein. The following remarks are believed to be fully responsive to the Office Action and, when coupled with the above amendments, are believed to render all claims at issue patentably distinguishable over the cited references.

The main substantive change to the claims is the added "wireless" in Claims 1 through 5, 7 through 9, 13 through 17, 19, 20, 21, and 25.

No Claims are cancelled herein and Claims 1 through 5, 7 through 9, 13 through 17, 19, 20, 21, and 25 are amended according to the specification and drawings originally filed and thus do not raise new issues for consideration.

Applicant respectfully requests reconsideration in light of the above amendments and the following remarks.

### CLAIM REJECTIONS- 35 U.S.C. SECTION 103(a)

With respect to Page 2 through Page 6 of the Office Action, the Examiner rejected Claims 1 through 4, and 8 under 35 U.S.C. Section 103(a) as being unpatentable over Harada et al. (hereafter represented as "Harada") in view of Döing et al. (hereafter represented as "Döing"), Claims 5 through 7 under 35 U.S.C. Section 103(a) as being unpatentable over Harada in view of Döing and further in view of Bishay, and Claims 9 through 25 under 35 U.S.C. Section 103(a) as

being unpatentable over Harada in view of Döing and further in view of Pirelli.

Applicant respectfully traverses these rejections.

The Examiner is of the opinion in Pages 2 through 3 that Harada discloses the identical functions as claimed invention except the bar-code scanner. The Examiner is also of the opinion that Döing discloses a dialysis machine using a barcode as an identification code and a barcode reader as a detecting device. Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to further substitute the barcodes as identifiers and the bar-code reader as a detector device, as taught by Döing.

Applicant observes that the proposed combinations of Harada and Döing cannot serve as a basis for a finding of obviousness.

Actually, Harada discloses semiconductor equipment and apparatus for supplying to semiconductor equipment. The semiconductor equipment specifically includes gas cylinders, a semiconductor producing section, gas pipe line means for carrying multitudes of special material gases from the plurality of gas cylinders to the semiconductor producing section, and **inline gas detector means for measuring gas components and concentrations in the gas pipe line means** (column 7, lines 48 through 56). Furthermore, the apparatus taught by Harada includes pipe lines coming together at a junction, **massflow controllers in the respective pipe lines**, an **inline gas monitor disposed in a junction pipe**, and a controller connected to the massflow controllers and the inline gas monitor (column 8, lines 11 through 26). Applicant observes that the detector taught by Harada is disposed in a gas pipe line and **measures gas**

**components or concentrations in an inline manner** (column 2, lines 45 through 49). Thus, Harada teaches **a detector directly measuring characteristics of special material gases for semiconductor.**

On the other hand, Döing discloses a connector adapted to connect a storage container. The connector includes an identifier arranged to indicate a position of the connector to determine incomplete connection to a medical apparatus, and the bar code indicates two different patterns for connection situations (column 6, lines 8 through 12). Döing teaches the bar code as identifier running circumferentially around the connector (column 4, lines 32 through 34, and FIGS 1 through 2) and a detector device for detecting a bar pattern (column 4, lines 51 through 54). Thus, the **detector device** taught by Döing **executes detecting from the exterior of the connector**, rather than in the interior of the connector. Furthermore, the detector device **detects a bar pattern, rather than material or species in the connector.**

Accordingly, when Harada's disclosure would be proposed to combine with Döing's disclosure, **the detector device taught by Harada is not substituted by one taught by Döing.**

However, the present Invention discloses apparatus that includes a wireless controller, a bar-code scanner communicating with the wireless controller for collecting bar-code information of a material supply equipment, and alarm devices (amended Claims 1 and 9). The bar-code scanner taught by the present Invention collects the information of the bar code stamped on the material supply equipment (Page 6, lines 11 through 14 in the original Specification),

**rather than collecting the information of the inside material species themselves taught by Harada.** Thus, the apparatus or system with inline gas detector disclosed by Harada does not implicitly nor explicitly, teach one disclosed by the present Invention.

Furthermore, the bar-code scanner disclosed by the present Invention communicates with a wireless controller in a wireless manner (Page 6, lines 16 through 19). However, Döing discloses a preparation device including a detector having bar code readers and control device, wherein the control can control the flow of the solution through a valve or flow meter (column 5, lines 12 through 16, and FIG. 2). **Döing does not, implicitly nor explicitly, teach the control device that is wireless and wirelessly communicates with bar code reader taught by the present Invention.** Accordingly, a person having ordinary skills in the art at the time can not obviously know the claimed Invention well in accordance with Harada, Döing, or combination of both.

However, as well as the amended Claim 1, Claims 2 through 4 dependent on the amended Claim 1 are not obvious from Harada, Döing, or combination of both, either.

The Examiner is also of the opinion in Pages 4 through 5 that Bishay discloses a barcode reader that has a wireless connection which communicates via a wireless line. Thus, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made further incorporate the barcodes that communicates using a wireless link as taught by Bishay in addition to the teachings of Harada in view of Döing.

Amended Claim 7 emphasizes that the wireless controller connects to a procurement and material management system. And the information included in bar-code taught by the present Invention differs from those taught by Harada or Döing (Claim 8). When the controller could connects to the management system, **the present Invention provides checking material supply equipment with the management** (Claims 7 and 8), which is not obvious taught by Harada, Döing, Bishay, or combination of all. Furthermore, the present Invention provides the alarm devices and directly disable the corresponding material supply equipment **before the abnormal material species enter into pipe lines or reaction container** (amended Claim 1 and Claim 3), which provides different control stage and method from ones taught by Harada, Döing, Bishay, or combination of all.

Accordingly, a person having ordinary skills in the art at the time can not obviously know the Claims 5 through 8 well in accordance with Harada, Döing, Bishay, or combination of all.

Accordingly, it is respectfully submitted that independent Claim 1 as currently presented is patentable over the cited art. Regarding the rejected dependent claims, they not only include patentable features as claimed in the corresponding independent claims, but also possess added specific limitations not presented in Claims 2 through 8.

The Examiner is also of the opinion in Pages 5 through 6 that Claims 9-25 are rejected over Harada, Döing as applied to Claims 1 through 4 above, and further in view of Pirelli. Actually, Examiner observes there is not any suggestion among Harada, Döing, or Pirelli

to combine each another. **The disclosure taught by Harada or Döing focuses on checking situation in the manufacturing process, there is no sign to check material species between inventory and process.** Furthermore, even the combination of Harada, Döing, and Pirelli would be proposed, the identification of supply material species would not be taught by the combination of Harada, Döing, and Pirelli for that Pirelli's disclosure does provide the current items information in the manufacture process (column 10, lines 33 through 35). However, **the present Invention provides checking both the current user and the current material species before those material species enter into the pipe lines or reaction containers** (Page 9, lines 4 through 7). Furthermore, the present Invention provides the checking and treatment communication through two different network (Page 10, lines 10 through 22), which is not taught by Harada, Döing, Pirelli, or their combination.

Accordingly, it is respectfully submitted that independent Claims 9 and 19 as currently presented are patentable over the cited art. Regarding the rejected dependent claims, they not only include patentable features as claimed in the corresponding independent claims, but also possess added specific limitations not presented in Claims 10 through 18, and Claims 20 through 25.

It is therefore respectfully submitted that Claims 9 through 25 are patentable over Harada, in view of Döing, Bishay, Pirelli under U.S.C. Section 103(a).

#### CONCLUSION

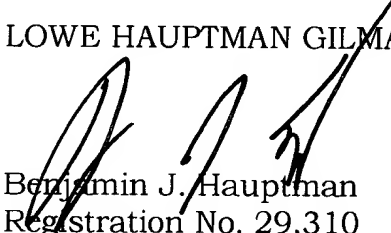
In the light of the above amendments and remarks, Applicant observes that the claimed Invention is also not taught by Ahn et al.

nor Sato et al. Applicant respectfully submits that all pending Claims 1 through 25 as currently presented are in condition for allowance. Attached hereto is a marked-up version of the changes made to the claims by current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE". Applicant has thoroughly reviewed that art cited but relied upon by the Examiner. Applicant has concluded that these references do not affect the patentability of these claims as currently presented. Accordingly, reconsideration is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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VERSION WITH MARKING TO SHOW CHANGES MADE

In the Claims:

Claims 1 through 5, 7 through 9, 13 through 17, 19, 20, 21, and 25 are amended as follows:

1. (Amended) Apparatus for interlocking material supply equipment in semiconductor manufacture system, said apparatus comprising:
  - a wireless controller used for treatment of bar-code information;
  - a bar-code scanner communicating with said wireless controller through a transmission system, said bar-code scanner for collecting said bar-code information of said material supply equipment; and
  - a plurality of alarm devices coupled to a plurality of material supply equipment and said wireless controller, said alarm devices receiving a plurality of alarm message from said wireless controller.
2. (Amended) The apparatus of claim 1, wherein said wireless controller comprises software having a function of by-pass bar-code.
3. (Amended) The apparatus of claim 1, wherein said treatment of said wireless controller comprises:
  - receiving said bar-code information from said bar-code scanner through said transmission system;
  - checking said bar-code information;
  - transferring said alarm message into said alarm devices; and



disabling said corresponding material supply equipment according to said alarm message.

4. (Amended) The apparatus of claim 1, wherein said treatment further comprises displaying said alarm message on a display screen of said wireless controller and disabling a plurality of consequent steps corresponding said material supply equipment on said display screen.

5. (Amended) The apparatus of claim 1, wherein said transmission system comprises a wireless communication station and an input/output device.

7. (Amended) The apparatus of claim [5] 1, wherein said [input/output device is a hub]wireless controller further connects to a procurement and material management system.

8. (Amended) The apparatus of claim 1, wherein said bar-code information comprises:

a material name;

a material lot number;

a quantity of said material; and

an identification of said equipment material for checking of said wireless controller.

9. (Amended) A system for interlocking material supply equipment in semiconductor manufacture system, said system comprising:

collecting means for collecting a user's and material information;

communication means for transferring said user's and said material information;

a wireless controller communicated with said material supply equipment and said collecting means through said communication means, said wireless controller for sending out a plurality of alarm message; and

alarm means coupled to said material supply equipment and communicated with said wireless controller through said communication means, said alarm means for displaying said alarm message and controlling said material supply equipment.

13. (Amended) The system of claim 12, wherein said barcode comprises:

- a material name;
- a material lot number;
- a material quantity; and
- a material identification for checking of said wireless controller.

14. (Amended) The system of claim 9, wherein said communication means comprises a wireless communication station and an input/output device.

15. (Amended) The system of claim 9, wherein said wireless controller comprises communicating with a plurality of exterior wireless controllers.

16. (Amended) The system of claim 9, wherein said wireless controller is used for treatment of said user's and said material information, and said treatment comprises:

- receiving said user's and said material information from said collecting means through said communication means;
- checking said user's and said material information;
- transferring said alarm message into said alarm means; and

disabling said material supply equipment according to said alarm message.

17. (Amended) The system of claim 16, wherein said wireless controller further comprises displaying said alarm message, said user's and material information on a display screen of said wireless controller and disabling a plurality of consequent steps for said corresponding material supply equipment on said display screen.

19. (Amended) A method for interlock managing change materials of material supply equipment in semiconductor manufacture system, said method comprising:

collecting changed material information of said material supply equipment;

checking said changed material information by a wireless controller communicated with said material supply equipment;

sending out an alarm message to said material supply equipment from said wireless controller; and

disabling said corresponding material supply equipment according to said alarm message.

20. (Amended) The method according to claim 19 further comprising:

authorizing a user to collect said changed material information;

transferring said changed material information to said wireless controller through a wireless communication station and a local network; and

displaying said changed material information and said alarm message on a screen of said wireless controller.

21. (Amended) The method according to claim 19, wherein said disabling step comprises disabling a plurality of consequent steps of said corresponding material supply equipment shown on a display screen of said wireless controller.

25. (Amended) The method according to claim 19, wherein said checking step comprises comparing said changed information with a database of said wireless controller.